**LRO STUDY GUIDE: BLOCK 2**

I. Fundamentals of Materiel Management

A. Policy and Procedure: **DOD 4140.1-R Supply Chain Materiel Management Regulation requires each military service to “maintain materiel control and visibility of the secondary inventory down to and including retail inventories**

1. The AF will establish wholesale and retail stockage objectives for peacetime and war reserve materiel (WRM)

2. Wholesale and retail activities shall have visibility of serviceable items transferred to Defense Reutilization and Marketing Service (DRMS)

B. Account Categories: Each base will be designated as either a primary or a satellite account

1. Primary (category I) have computer capability

2. Satellite (category II/III) are smaller activities for which the primary account provides computer capability

C. How accounts are identified: accounts are identified in two ways: SRAN and System Designator Codes

1. **Stock Record Account Number (SRAN): accounts, whether primary or satellite, have their own SRAN**

**a. SRAN identifies the address of the account**

**b. SRAN is a six position, alpha numeric code**

**i. position 1: Service Code (“F” for Air Force)**

**ii. position 2: Type Activity Code**

**A=Administration**

**B=Base Supply**

**C=Civil Engineering**

**D=Depot**

**E=Equipment**

**W=Weapons**

**X=Miscellaneous**

**iii. positions 3-6 Unique Numeric Serial Number**

2. System Designator Codes: second manner in which accounts are identified

a. A primary base will always have a System Designator of “01”

b. A satellite base will have a two-position, alpha numeric code such as “A1”

--Example: if Travis AFB acts as the primary for Hickam AFB and Elmendorf AFB, then Travis’ System Designator is “01” as the primary and Hickam might be “A1” with Elmendorf’s being “A2”

D. **Classes of Supply: supplies are broken down into 10 classes**

**1. Class I: subsistence (food)**

**2. Class II: clothing, individual equipment, tools, admin supplies**

**3. Class III: Petroleum, Oils, and Lubricants (POL)**

**4. Class IV: construction material**

**5. Class V: Ammunition**

**6. Class VI: Personal Demand Items**

**7. Class VII: Major End Items (TRAP=tanks, racks, adapters, and pylons)**

**8. Class VIII: Medical Materiel**

**9. Class IX: Repair Parts**

**10: Class X: Materiel for Non-military Programs (agriculture, etc.)**

E. National Stock Numbers: a National Stock Number (NSN) is the official label applied to an item of supply that is repeatedly procured, stocked, stored, issued, and used throughout the federal supply system—used to identify and manage nearly every imaginable item, from *aircraft parts to light bulbs*

1. NSNs are used by the U.S. military, NATO, and some other foreign governments

**F. Expendability, Recoverability, Reparability, Cost Category Codes Designator (ERRCD): are a three position, alpha numeric code assigned to items for management purposes based on the nature and cost of the item.**

**1. The three elements of ERRCD are Expendability, Recoverability/Reparability, and Cost Category**

**a. Expendability: goes in the first position and indicates whether an item is consumed in use or loses its original identity during periods of use**

**i. X=Expendable**

**ii. N=Nonexpendable**

**b. Recoverability/Reparability: goes in the second position and indicates the highest level of repair and the lowest level of condemnation**

**i. B=User**

**ii. F=Field**

**iii. D=Depot**

**c. Cost Category: goes in the third position and indicates the cost category in which the item belongs**

**i. Investment: indicates that an item is expensive and paid for by the Depot, MAJCOM, or Air Force**

**ii. Expense: indicates that an item is less expensive and paid for with base level (organizational) funds**

G. Materiel Management Flight: **Responsible for stocking, storing, issuing, managing, inventorying, and inspecting DOD supplies and equipment** and is the primary liaison between customers and the GLSC

1. The Materiel Management Flight Consists of three sections:

a. **Asset Management Section: responsible for stocking, storing, issuing decentralized inventory, and inspection management of DOD supplies and equipment to include aircraft parts and HAZMAT**--\*make sure you differentiate from the definition for Materiel Management Flight above\*

b. Maintenance Support Section: consists of two elements Maintenance Support Liaison and Flight Service Center

c. Customer Support Section: serves as the materiel management liaison and equipment accountability authority for wing customers

i. **Customer Support Liaison Element responds to customer logistics concerns and proactively anticipates problems that could stand in the way of wing units fulfilling mission requirements**

2. **AFMAN 23-110 establishes a uniform system of stock control throughout the Air Force by prescribing standardized procedures for the requisition, purchase, receipt, storage, stock control, issue, shipment disposition, identification of and accounting for supplies by AF organizations**

II. Customer Support Sections

A. Customer Requests: normally when AF customers require supplies or equipment items, they submit either expedite or routine issue requests

1. Expedite requests are those urgently required by the customer to alleviate work stoppage or potential mission degradation

2. Routine are every day requests

B. Customer Issue Request Submission Methods: there are three different forms that customers may use to submit issue requests: AF Form 2005, DD Form 1348-6, and AF Form 1445

1. AF Form 2005 (used most often)

a. Force Activity Designator (FAD): a one position numeric character that is assigned by the Secretary of Defense that identifies the type of unit that is making the request

**I=Combat Units**

**II=Combat Readiness Units**

**III=Deployment Readiness Units**

**IV=Active and Reserve Units**

**V=Firm Future Requirement and Stock Replenishment**

b. Urgency of Need Designator (UND): used to express varying degrees of urgency when operational effectiveness is impacted due to non-availability of requested materiel

i. There are six UNDs total; *the three discussed here pertain to items that are not aircraft parts, and thus are not related to MICAP requests*

**A= prevents the activity from performing its mission**

**B= impairs the mission but does not prevent it**

**C= stock replenishment or other routine requirements**

C. Issue Request Results

1. Once an issue request is processed in the system, one of four things can happen

a. The item is issued

b. The issue is “killed” because there are no assets available locally

c. The item is backordered

d. The issue is rejected

2. Backorders

a. **MILSTRIP: Military Standard Requisitioning and Issue Procedures—a standard or uniform method of requisitioning supplies from the source of supply (SOS) that all branches of service are required to use**

b. There are two types of backorders

i. **Internal supply**: used to replenish shortages of secondary equipment and WRM

ii. **Customer backorders**: insufficient stocks are available for issue upon customer request and are managed internally by the supply system using “due out” detail records—two types of customer backorders

1. Firm Customer Backorder: requested materiel is not available and requisitioning action has been taken

2. Memorandum (Memo) Customer Backorder: requisitioning action has not been taken because the customer does not presently have the funds available to purchase the requested materiel

D. Requisitions: **a requisition is a demand placed on the source of supply (SOS) by the LRS**—there are four types of MILSTRIP wholesale status that an item can be in when it is requisitioned

1. **Positive supply status**: items are on the shelf and ready for shipment from the SOS

2. **Cancellation status**: the item has been cancelled and customer will not receive the requested item—has the worst effect on the customer

3. **In-transit/Shipped status**: the item has reached the transportation stage and is en route

4. **Exception/Other status**: results from out of stock conditions that stop the SOS from filling the requisition exactly as requested

E. MICAP backorders: Mission Capable (MICAP) backorders result in **the highest form of expedited backorder established in the retail supply system** (normally this type of backorder involves an aircraft part in the Air Force)

1. Urgency of Need Designator (UND) for MICAP requests (see also section II(B)(1)(b) above for more on UND)

**1=prevents the activity from performing its mission**

**J=impairs the activity from performing its mission**

**/=battle damage**

2. Alternative methods to satisfy MICAP backorders

a. **lateral support**: shipment of assets from another base to satisfy the MICAP request

b. **Cannibalization**: authorized removal of specific components from one item of AF property for use on another item of AF property

c. **Turn-in of serviceable assets**: check the base repair cycle to see if another item is available

d. **Local manufacture**: make it yourself

F. Air Force Equipment Management System (AFEMS)

1. AFEMS provides AF equipment managers with uniform ways of handling equipment in all commands—further, it specifies procedures for virtually all aspects of equipment handling and record keeping

a. equipment items are identified by their ERRCD codes ND\* or NF\* (they are nonexpendable items that are condemnable at the depot and field level)

b. most nonexpendable and some expendable items in WRM, low speed vehicles, Individual Body Armor (IBAs) and body armor plates are managed by AFEMS

2. **The overall objective of AFEMS is to achieve organizational readiness within reasonable budgetary limits**

G. Equipment Custodians: individuals can be appointed to be responsible for certain pieces of equipment within a unit on base—this individual must have a basic knowledge of and interest in equipment management and must enforce supply discipline

1. The unit commander will submit a request to appoint an equipment custodian to the LRS Equipment Accountability Office (EAO)

2. Eligible and Ineligible personnel to be Equipment Custodians

a. Eligible: commissioned officers (*except those officers directly involved with the readiness of combat forces*); Noncommissioned Officers (NCOs); warrant officers; contractors (if permitted in their respective contracts); civilians with a minimum grade of GS-5

b. Ineligible: **Senior Airman (SrA) and below are not eligible**

H. LRS Equipment Accountability Office (EAO):

1. Ensures the accountability of in-use equipment is properly maintained

2. Ensures equipment custodians are properly conducting their duties

3. Ensures squadron commanders are provided feedback on the maintenance of accountability of the equipment issued to their squadrons

4. Schedule **annual** organizational visits to ensure equipment custodians are adequately performing their accountability responsibilities

I. AFGLSC Equipment Management Element (EME): primary responsibility is to ensure supply system and AFEMS databank accuracy

J. MAJCOM Command Equipment Management Office (CEMO): responsible for equipment programs within their command. They issue equipment authorizations and allowances based on war and peacetime needs of all AF units. They redistribute base funded items and conduct inspections to see that base-level management procedures are being carried out effectively

Levels of AF Equipment Management:

\*AF GLSC EME => MAJCOM CEMO => LRS EAO => Unit Equipment Manager\*

\*AFEMS is the system that provides a uniform way of managing AF equipment at all levels—from the EME down to the individual unit Equipment Managers\*

K. Equipment allowance standards: describe the items and quantities of equipment required to perform the missions and duties of AF organizations and individual specialists

1. Basis of Issue (BOI): the BOI in allowance standards is normally the maximum quantity for a nonexpendable item, which may be authorized in properly substantiated (justified) by workload, use data, or other adequate justification

L. Weapons and COMSEC (Secure Communications Equipment)

1. Weapons are defined as carbines, grenade launchers, machine guns, pistols, recoilless weapons, revolvers, rifles, shotguns, etc.

2. COMSEC items are defined as equipment and components used to secure official communications

3. Reconciliation (accountability) of weapons and COMSEC: records must be maintained with **100% accuracy**.

III. Commodity Control

A. Inventory: there are four (4) types of inventory:

1. **Safety Inventory**: the amount of inventory needed to protect against unpredictable fluctuations in supply, demand, or productions rates

2. **Cycle Inventory**: the amount of inventory needed to meet normal day-to-day operating requirements

3. **Anticipation Inventory**: the amount of stock needed for a predictable surge of demand

4. **Pipeline Inventory**: the amount of stock needed that should be on its way to the customer in order to support future customer orders

B. **Inventory Control: The art of ensuring the right items are in stock, in the right quantities to ensure availability to the customer, yet minimize waste or spoilage**

1. Receive materiel: AFMAN 23-110, Vol. II, Part 2, Chapter 10 details supply policy and procedures for the general processing of materiel receipts to include the handling of specific types of items and local purchasing requirements

2. There are four (4) possible results when items are received by retail supply:

a. **Due-Out Release (DOR) Document: if a customer backorder (due-out) exists for the received item, the retail supply system will produce a DOR document on DD Form 1348-1A**

b. Notice to Stock: if no customer backorder exists, the retail supply system will produce a notice to stock in which case the item will be properly stored

c. Unserviceable Notice: produced because the item was received damaged or unserviceable

d. Reject Notice: tells the user their previous input does not contain adequate information for processing the transaction

C. Receipt Problems: four (4) types of problems

1. **Quantity Discrepancies**: occurs when the number of items received does not match the quantity stated on the incoming documentation

2. **Documentation Discrepancies**: there are issues with the documentation

3. **Misidentified Items**: any item received where the stock number does not match the receipt documentation

4. **Unserviceable/Damaged Items**: items arrive damaged—LRS representative marks the shippers bill of lading with the number of damaged items and obtains the signature of the driver or carrier’s agent.

a. Damaged items are still accepted and processed into the supply system

D. Hazardous Materials Management: **AFI 32-7086** establishes procedures and standards that govern management of hazardous materials (HAZMAT) throughout the Air Force

E. Organizational Refusals: occur when the customer refuses to accept an item for any number of reasons.

1. When this occurs the person refusing the property must annotate all copies of the ISU/MSI/DOR document with the phrase: “ORGANIZATION REFUSAL”

2. The person refusing must give an explanation for refusing the property

3. The person refusing must sign the document

E. Stockage Policy

1. **Range** of stock: how many different items are stocked at the base

2**. Depth** of stock: how much to stock once we have decided to stock the item

3. Demand Based Stock Levels: designed to provide sufficient stocks to meet expected demands during the replenishment pipeline

a. past demand is often the best predictor of future demand—therefore it makes sense to use historical data when determining future demand

b. Daily Demand Rate (DDR): simply defined as the average quantity of an item that is used daily

c. Number of Demands (ND): a count of the number of customer demands for an item

4. Centrally Computed Consumable Item Stock Levels: there are three (3) Air Force methodologies for centrally computing levels for consumable items

a. AFMC managed items: **Readiness Based Leveling/D035E**

b. DLA managed items:

i. Customer Oriented Leveling Technique (**COLT**)—used for items that have an established demand pattern

ii. Proactive Demand Leveling (**PDL**)—used for items that have no demand history or extremely low historical demands

5. Non-Demand Based Stock Level: *adjusting* type of stock leveling capability is required to support unpredictable, sporadic, and/or high priority requirements

a. Types of Adjusted Stock Levels:

i. **Minimum Levels**: minimum ASL is one of the more common types of ASL used in the retail supply system and is defined as the minimum quantity of an item required to be available to support operations—regardless of activity

ii. **Maximum Levels**: used to **restrict** stockage—will not begin to restrict stockage until the computed demand-based stock level exceeds the maximum level quantity

iii. **Fixed Levels**: maintain constant quantity of an item to meet mission requirements; may be determined without regard to demand history

6. Base Redistributable Materiel (Excess Stock): simply defined as serviceable or unserviceable stock that exceeds base stockage requirements

F. Accountability Discrepancies

1. Inventory Activities

a. Establishing an inventory schedule: the **Logistics Manager** will establish an inventory schedule by fiscal year to ensure all items assigned a warehouse location and/or on a detail record are inventoried (*in other words inventories have to been done annually*)

i. **inventories on weapons, Nuclear Weapons Related Materiel (NWRM) and COMSEC must be done semi-annually**

ii. Who can count? Anyone!

b. World-wide inventories: AFMC may request a world-wide inventory on specific items that may be located at other AF activities (example: weapons count done all over the AF)

2. Methods of Inventories: there are two general types

a. **Complete Inventory Count**: designed for conducting inventory counts of all items within specified parameters—**conducted using the closed warehouse method**—applies to all stock record accounts, **satellite accounts**, and custodial accounts

b. **Special Inventory Count**: used to reconcile out of balance conditions that are discovered during other than complete or sample inventory counts

i. Adjustment to Accountable Records: all adjustments or corrections to accountable records must be accomplished within **30 days** following initial comparison of the count to the record balance

3. Types of Research: inventory discrepancies are subject to three (3) types of research:

a. Post Count Validation: the **first** type of research performed when the inventory count and the system record balance do not match

b. Pre-adjustment Research: performed to verify that the **system balance is correct**

c. Causative Research: identifies the **root cause** of inventory discrepancies

4. Types of Discrepancies: 2 types

a. Resolved Discrepancies: occur because of an accountable processing error—an accounting adjustment like **reverse-post** will correct these discrepancies

b. Unresolved Discrepancies: any discrepancy that cannot be corrected by **re-processing** a transaction to correct the system balance

5. Monthly Management Reports (M-32): provides a standard, comprehensive, and detailed management product to serve the needs of all logistics managers for all accounts, **both host and satellite**

IV. Maintenance Support

A. Maintenance Supply Liaison (MSL): monitors the overall maintenance and materiel interface, resolves materiel support problems, reviews reports, and coordinates materiel management related training needs for decentralized materiel support personnel—**MSL is the liaison between maintenance units and the GLSC**

1. MSL personnel are authorized on the LRS Unit Manning Document (UMD) and **report to the LRS Commander (LRS/CC)**

2. AFMAN **23-110, Vol. 2, Part 2** details MSL duties and responsibilities

3. Two forums (meetings) established to enhance communication between LRS and maintenance:

a. Daily wing stand-ups/maintenance meetings

b. Intermediate Repair Enhancement Program (IREP) meetings

B. Decentralized Supply Support: imbedded supply airmen (2S career field) who work in maintenance to support maintenance activities

1. They are authorized on the Maintenance Group (MXG) UMD

2. They report to maintenance activities (maintenance units)

C. Intermediate Repair Enhancement Program (IREP): provides wing senior leadership a forum to evaluate current aircraft weapons systems resource and support status, highlight specific problem areas, focus on local repair initiatives to include the AFREP processes, and discuss ways to improve the overall repair cycle process

1. **MXG/CC is the OPR for the IREP program**

2. Meetings will be held at least **quarterly** and chaired by the WG/CC, WG/CV, or MXG/CC and organized by the MOF

3. The objective of the IREP meeting is to increase overall base self-sufficiency for repair and reduce the overall cost of operations

i. Asset Profile/Top Projected MICAP situations: an asset profile is an in-depth review of an asset identified as critical to mission accomplishment or that causes frequent MICAP situations

ii. Test Station Equipment Profile: test stations in-commission to efficient repair cycle output; TMDE and other shop deficiencies may have a negative effect on base repair cycle process

iii. Wing Self Sufficiency Initiatives: include discussion of new wing, group, and squadron AFREP initiatives and other local self-sufficiency repairs

D. Flight Service Center (FSC): manages the repair of certain items until they are either repaired or turned in as repaired or unserviceable

1. Supply Points: additional warehouses located within or next to the activities they support

a. Organizations requesting a supply point must provide the necessary space and facilities

b. LRS/supply maintains overall accountability and control of assets in Supply Points

i. however, organizational personnel (i.e. maintenance) may manage the supply point for certain large items

ii. when this happens, all supply procedures will be adhered to

c. Establishing a Supply Point: the Materiel Management Flight Commander, **in coordination with the applicable maintenance control officer**, may establish a Supply Point

2. TCTO Kits: contains all parts and materiel required to complete a modification on one end article (e.g. a single aircraft, missile, end item of equipment, spare part, or component as specified in a Technical Order)

3. Due-In From Maintenance (DIFM) Management Concept: all reparable (XD/XF) items removed from an aircraft or end item are subject to repair cycle control.

a. Removal of a malfunctioning reparable item is normally followed by a request to supply for a replacement item.

b. When the replacement request either issues or backorders, the remove item will normally be automatically placed under DIFM procedures

E. Maintenance Turnaround (TRN): occurs when a repair cycle item is repaired and reinstalled on the aircraft/end item without physically processing through the LRS/supply activity

1. TRN Data: data for processing a TRN will be provided to the TRN manager by the maintenance activity on **AFTO Form 350**

2. Effects of TRN Processing: **will have the same effect as an issue, repair and subsequent turn-in of a XD/XF asset**